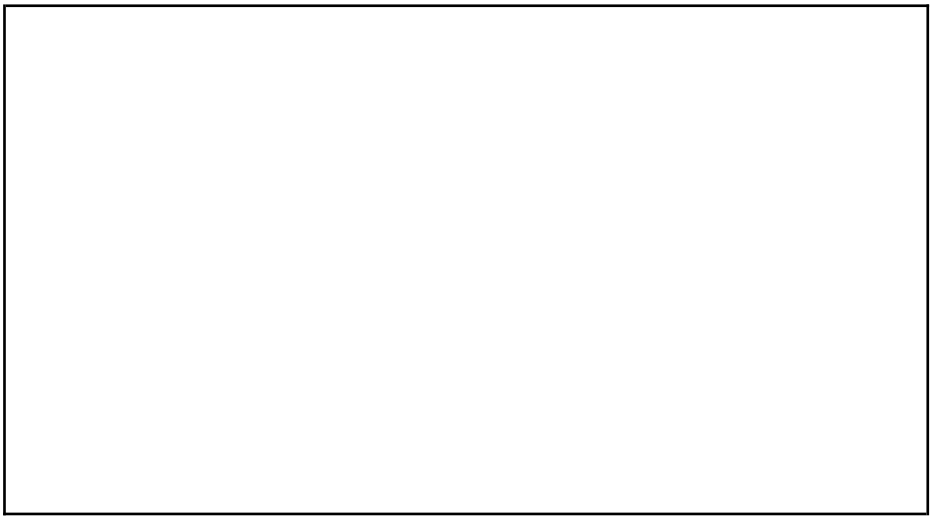
48TJD/TJF016, 020, 024, 028
SINGLE-PACKAGE COOLING UNITS WITH FACTORY-INSTALLED GAS HEAT

50TJ016, 020, 024, 028
SINGLE-PACKAGE COOLING UNITS WITH FACTORY-INSTALLED OPTIONAL ELECTRIC HEAT

— PERFORMANCE DATA
— CERTIFIED DIMENSION PRINT
— CERTIFIED ROOF CURB DIMENSION PRINT
— CERTIFIED HORIZONTAL SUPPLY/ RETURN ADAPTER ROOF CURB DIMENSION PRINT
— SERVICE OPTION DIMENSION PRINT

50/60 Hz



© 1998 Carrier Corporation • Syracuse, New York 13221

Form 48/50TJ-1SB Supersedes 48TJ-14SB, 50TJ-8SB, 50TJ-9SB Printed in U.S.A. 9-98 Catalog No. 514-803

Date:	Supersedes:	**48/50TJ016,020,024, 028 SINGLE PACKAGE COOLING UNIT WITH GAS HEAT (48TJ) OR OPTIONAL ELECTRIC HEAT (50TJ)**	48TJ 50TJ	Rev.: -1SB
JOB NAME:		LOCATION:		
BUYER:		BUYER P.O. #	CARRIER #	
UNIT NUMBER:		MODEL NUMBER:		
PERFORMANCE DATA CERTIFIED BY:			DATE:	

ARI STANDARD 360

ALL 208/230 460 VOLT UNITS

DESCRIPTION

The 48TJ units are one-piece electric cooling/gas heating units and the 50TJ units are one-piece electric cooling/optional electric heating units, prewired and precharged. The 48/50TJ units have bottom air openings for separate supply and return ductwork. The 48TJD units are low heat units and the 48TJF are high heat units. The unit is intended for installation on an accessory curb (ordered separately). Horizontal supply and return connections are also possible with a factory-preassembled, high-static regain, horizontal conversion adapter roof curb accessory (ordered separately). Bottom discharge on concentric applications requires a transition duct (field-supplied) external to the unit.

FEATURES

Standard one-year warranty.

Five-year warranty on the compressor (48/50TJ016). One year warranty on the compressor (48/50TJ020-028).

Units are rated in accordance with ARI standard 360. Standard unit is certified and listed by ETL and ETL, Canada.

Low outdoor temperature cooling operation to 48/50TJ016 40 F (4 C), 48/50TJ020 35 F (2 C), 48/50TJ024 25 F (−4 C), and 48/50TJ028 48 F (9 C) as standard.

Dual freezestat protection is provided as standard.

Dual scroll compressors with internal linebreak overload protection.

Indoor and outdoor coils constructed of aluminum fins mechanically bonded to seamless internally grooved copper tubes.

Dual thermal expansion valve (TXV) metering devices.

Filter drier is provided in each refrigeration circuit.

Optional compressor suction and discharge service valves (all).

Manually adjustable outside air intake for up to 25% outside air.

Automatic changeover (when used with an auto-changeover thermostat).

Single-point gas and electric connections. Disconnect in accordance with NEC must be field-supplied and installed.

All units utilize 2-stage cooling.

Belt drive adjustable evaporator fan.

Cabinet of galvanized steel, bonderized and finished with prepainted baked enamel.

Cooling systems have low and high-pressure switches. Two-inch disposable type return air filters factory installed.

Provision for alternate end return in base unit. Horizontal supply available by using accessory curb. Economizer may be used with horizontal supply and return.

Three direct-drive propeller condenser fans with vertical discharge (48/50TJ016 and 020).

Two direct-drive propeller condenser fans with vertical discharge (48/50TJ024 and 028).

48TJ UNITS ONLY

Five-year non-prorated warranty on Alumagard™ coated Turbotubular™ heat exchanger.

2-stage gas heat in a single 2-stage gas valve.

Induced draft combustion system with Hall Effect sensor to detect proper operation of induced-draft motor.

Heavy Alumagard™ coated heat exchangers with aluminized steel burners.

Heating controls with solid-state direct spark ignition system (pilotless system) and redundant gas valve. High temperature limit switches and auto. reset flame rollout switch standard.

Integrated gas control board with built in diagnostics to determine error codes and control fan on/off delays for energy savings and maximum comfort control.

Integrated gas control board provides anti-cycle protection for gas heat operation.

PERFORMANCE DATA

Unit Operating Weight _____

Curb Weight _____

COOLING

Gross Total Capacity _____

@ Condenser Air Temperature _____

Gross Sensible Capacity _____

Compressor Power Input _____

Indoor Entering Air db _____ wb _____

Airflow _____ External Static Pressure _____

Indoor Fan Motor Size _____

Exhaust Fan Motor Size _____

HEATING

Heating Capacity:

Stage 1 _____

Stage 2 _____

Heating Capacity Total _____

Stage 1 _____

Stage 2 _____

Heating Capacity Total _____

ELECTRICAL DATA

Power Supply to Unit _____ Volts _____ Phase _____ Hz

Minimum Circuit Amps _____ Maximum Overcurrent Protection _____

SUBMITTAL DATA

Job Name _____

Architect _____

Engineer _____

Contractor _____

Unit Designation _____

OPTIONS AND ACCESSORIES

FACTORY INSTALLED

- ☐ Economizer
- ☐ Additional 5-Year (6th-10th Year) Extended Protection Plan on the Heat Exchanger
- ☐ Four-Year Extended Protection Plan on the Compressor (020,024,028)
- ☐ Apollo Controls
- ☐ Service option package (hinged access panels, non-fused disconnect, 115-v convenience outlet)
- ☐ Electric Heat (50TJ Only)

FIELD INSTALLED

- ☐ Economizer
- ☐ Solid-State Enthalpy Control
- ☐ Differential Enthalpy Control
- ☐ Winter Start Package
- ☐ Roof Curb (14 in.)
- ☐ Roof Curb (24 in.)
- ☐ Roof Curb (Horizontal Supply and Return)

FIELD INSTALLED (cont)

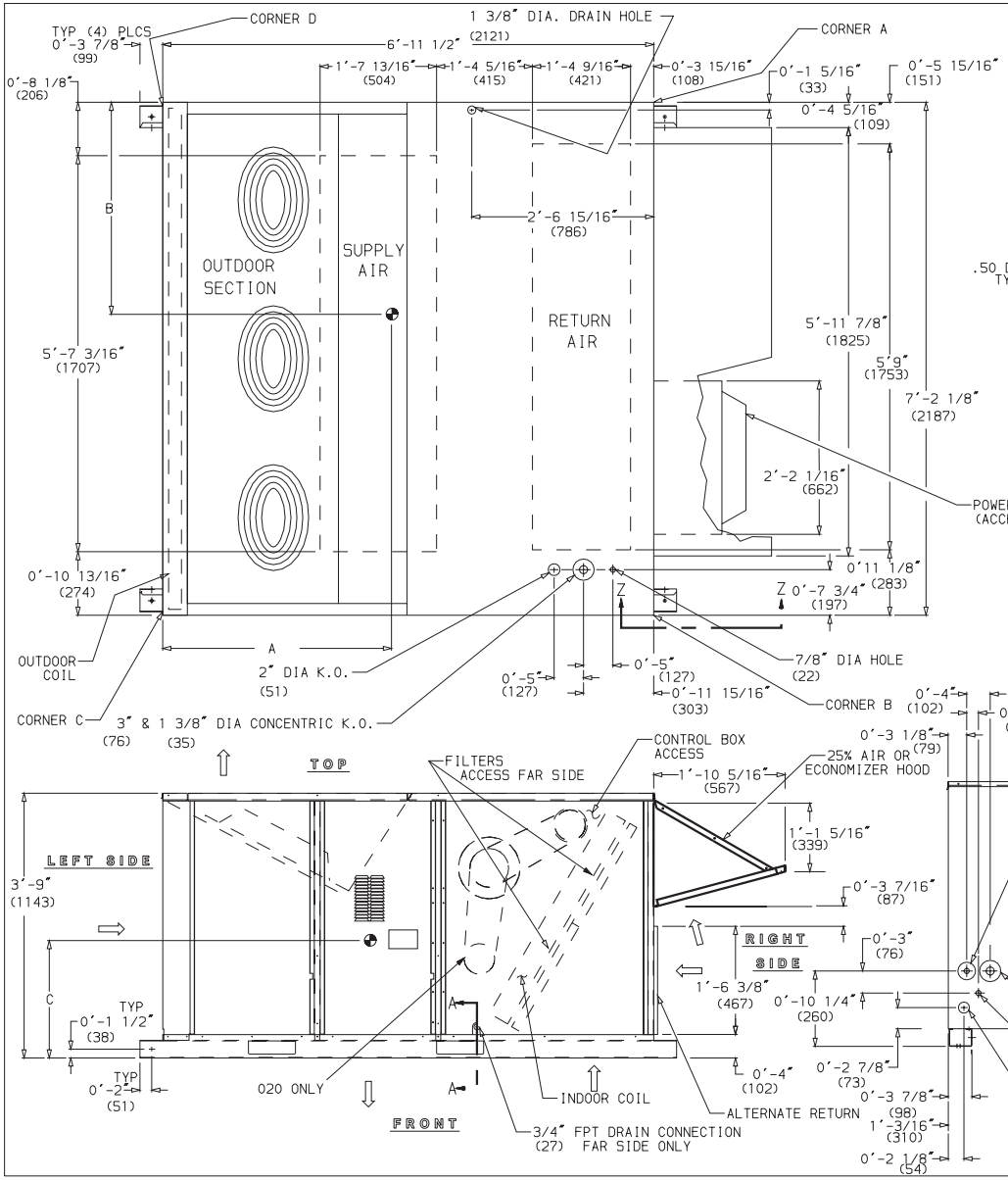
- ☐ Factory Preassembled, High Static Regain, Horizontal Conversion Adapter Roof Curb
- ☐ Additional 5-Year (6th-10th Year) Extended Protection Plan on the Heat Exchanger
- ☐ Four-Year Extended Protection Plan on the Compressor (020,024,028)
- ☐ Power Exhaust
- ☐ Barometric Relief
- ☐ Remote Control Panel
- ☐ Thermostat and Subbase
- ☐ Time Guard® Device
- ☐ Two-Position Damper Package
- ☐ Motormaster® Control
- ☐ Liquid Propane (LP) Gas Kit
- ☐ Hail Guard
- ☐ Hydronic (Glycol) Coil (50TJ Only)
- ☐ Electric Heat (50TJ Only)

CERTIFIED DIMENSION PRINT

UNITED TECHNOLOGIES CARRIER
P O BOX 4808 SYRACUSE N. Y. 13221

THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER CORPORATION'S WRITTEN CONSENT.

SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT



UNIT	STD UNIT WEIGHT		ECONOMIZER WEIGHT		CORNER A		CORNER B		CORNER C		CORNER D		DIM A		DIM B		DIM C	
	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	ft-in.	mm	ft-in.	mm	ft-in.	mm
48TJD, TJF016	1700	771	110	50	411	186	381	173	438	199	471	213	3-3	991	3-5	1041	1-10	559
48TJD, TJF020	1800	816	110	50	422	192	397	180	452	205	503	228	3-2	965	3-6	1067	1-8	508

NOTES:
1. Refer to print for roof curb accessory dimensions.
2. Dimensions in ( ) are in millimeters.
3. Center of Gravity.
4. Direction of airflow.
5. Ductwork to be attached to accessory roof curb only.
6. Minimum clearance:
   - Rear: 7'-0" (2134) for coil removal. This dimension can be reduced to 4'-0" (1219) if conditions permit coil removal from the top.
   - 4'-0" (1219) to combustible surfaces, all four sides (includes between units).
   - Left side: 4'-0" (1219) for proper condenser coil airflow.
   - Front: 4'-0" (1219) for control box access.
   - Right side: 4'-0" (1219) for proper operation of damper and power exhaust if so equipped.
   - Top: 6'-0" (1829) to assure proper condenser fan operation.
   - Bottom: 14" (356) to combustible surfaces (when not using curb).
   - Control box side: 3'-0" (914) to ungrounded surfaces, non-combustible.
   - Control box side: 3'-6" (1067) to block or concrete walls, or other grounded surfaces.
   - Local codes or jurisdiction may prevail.
7. With the exception of clearance for the condenser coil and the damper/power exhaust as stated in Note #6, a removable fence or barricade requires no clearance.
8. Dimensions are from outside of corner post. Allow 0'-5/16" (8) on each side for top cover drip edge.
9. See drawing 50TJ500352 for service option details.

DATE 08/26/98
SUPERSEDES -
48TJD/TJF016, 48TJD/TJF020
COMBINATION GAS HEATING/ELECTRIC COOLING UNITS
48TJ500545
REV -

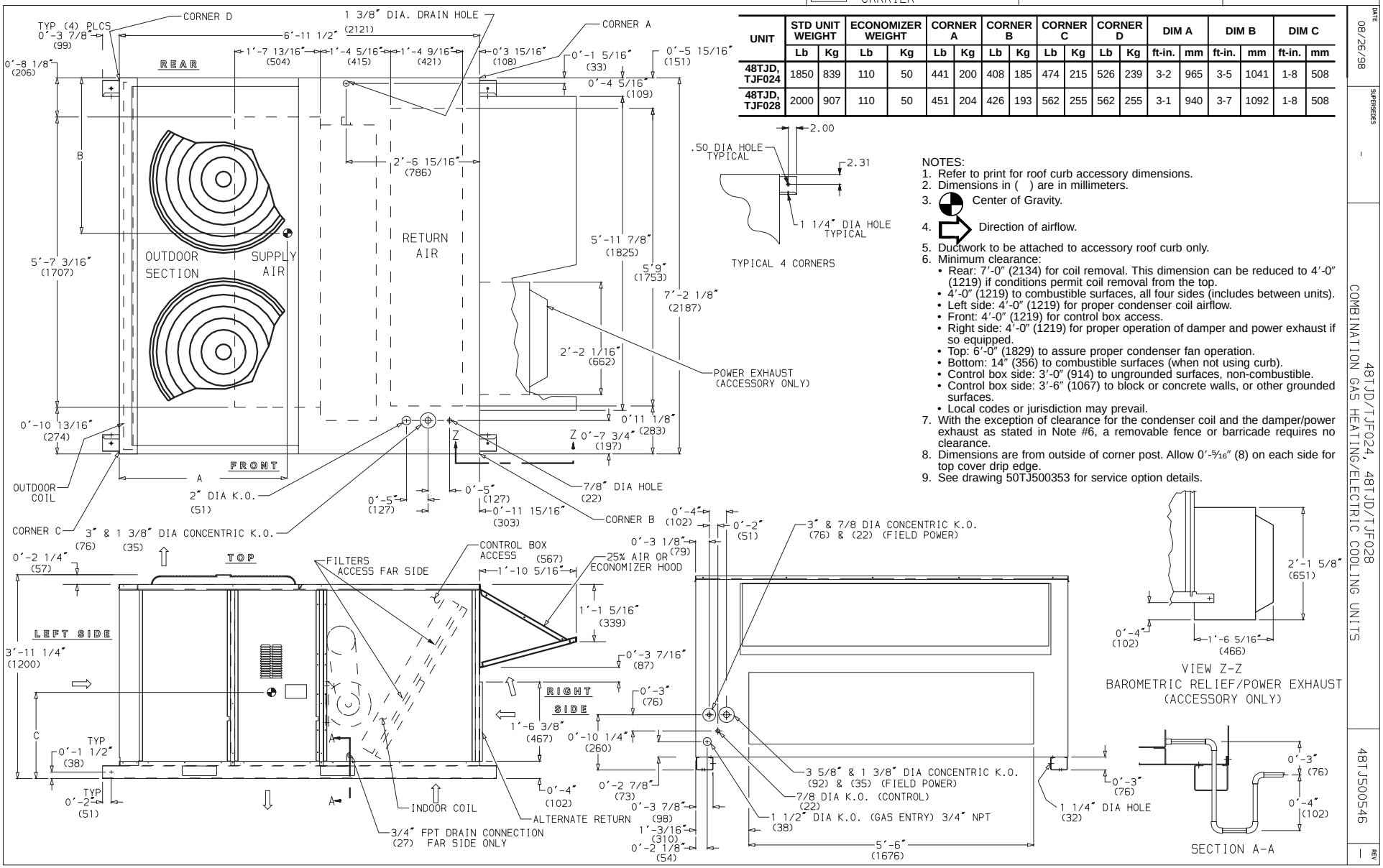
CUT ALONG DOTTED LINE CUT ALONG DOTTED LINE

CERTIFIED DIMENSION PRINT

UNITED TECHNOLOGIES CARRIER P O BOX 4808 SYRACUSE N. Y. 13221

THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER CORPORATION'S WRITTEN CONSENT.

SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT



UNIT	STD UNIT WEIGHT		ECONOMIZER WEIGHT		CORNER A		CORNER B		CORNER C		CORNER D		DIM A		DIM B		DIM C	
	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	ft-in.	mm	ft-in.	mm	ft-in.	mm
48TJD, TJF024	1850	839	110	50	441	200	408	185	474	215	526	239	3-2	965	3-5	1041	1-8	508
48TJD, TJF028	2000	907	110	50	451	204	426	193	562	255	562	255	3-1	940	3-7	1092	1-8	508

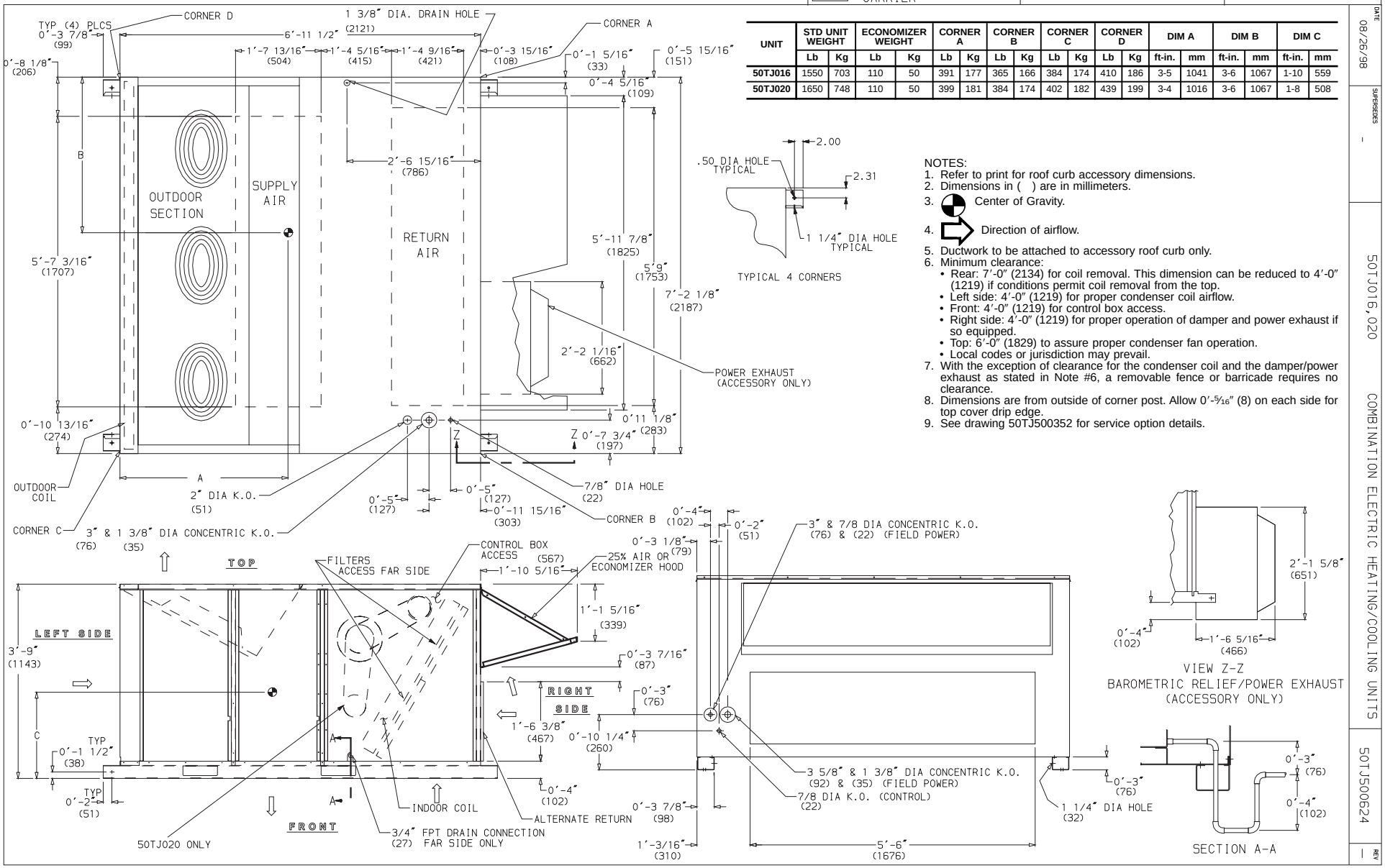
NOTES:
1. Refer to print for roof curb accessory dimensions.
2. Dimensions in ( ) are in millimeters.
3. Center of Gravity.
4. Direction of airflow.
5. Ductwork to be attached to accessory roof curb only.
6. Minimum clearance:
   - Rear: 7'-0" (2134) for coil removal. This dimension can be reduced to 4'-0" (1219) if conditions permit coil removal from the top.
   - 4'-0" (1219) to combustible surfaces, all four sides (includes between units).
   - Left side: 4'-0" (1219) for proper condenser coil airflow.
   - Front: 4'-0" (1219) for control box access.
   - Right side: 4'-0" (1219) for proper operation of damper and power exhaust if so equipped.
   - Top: 6'-0" (1829) to assure proper condenser fan operation.
   - Bottom: 14" (356) to combustible surfaces (when not using curb).
   - Control box side: 3'-0" (914) to ungrounded surfaces, non-combustible.
   - Control box side: 3'-6" (1067) to block or concrete walls, or other grounded surfaces.
   - Local codes or jurisdiction may prevail.
7. With the exception of clearance for the condenser coil and the damper/power exhaust as stated in Note #6, a removable fence or barricade requires no clearance.
8. Dimensions are from outside of corner post. Allow 0'-5/16" (8) on each side for top cover drip edge.
9. See drawing 50TJ500353 for service option details.

DATE 08/26/98 | SUPERSEDES - | 48TJD/TJF024, 48TJD/TJF028 COMBINATION GAS HEATING/ELECTRIC COOLING UNITS | 48TJ500546 | REV -

CERTIFIED DIMENSION PRINT

UNITED TECHNOLOGIES CARRIER
P O BOX 4808 SYRACUSE N. Y. 13221
THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER CORPORATION'S WRITTEN CONSENT.
SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT

UNIT	STD UNIT WEIGHT		ECONOMIZER WEIGHT		CORNER A		CORNER B		CORNER C		CORNER D		DIM A		DIM B		DIM C	
	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	ft-in.	mm	ft-in.	mm	ft-in.	mm
50TJ016	1550	703	110	50	391	177	365	166	384	174	410	186	3-5	1041	3-6	1067	1-10	559
50TJ020	1650	748	110	50	399	181	384	174	402	182	439	199	3-4	1016	3-6	1067	1-8	508



NOTES:
1. Refer to print for roof curb accessory dimensions.
2. Dimensions in ( ) are in millimeters.
3. Center of Gravity.
4. Direction of airflow.
5. Ductwork to be attached to accessory roof curb only.
6. Minimum clearance:
   - Rear: 7′-0″ (2134) for coil removal. This dimension can be reduced to 4′-0″ (1219) if conditions permit coil removal from the top.
   - Left side: 4′-0″ (1219) for proper condenser coil airflow.
   - Front: 4′-0″ (1219) for control box access.
   - Right side: 4′-0″ (1219) for proper operation of damper and power exhaust if so equipped.
   - Top: 6′-0″ (1829) to assure proper condenser fan operation.
   - Local codes or jurisdiction may prevail.
7. With the exception of clearance for the condenser coil and the damper/power exhaust as stated in Note #6, a removable fence or barricade requires no clearance.
8. Dimensions are from outside of corner post. Allow 0′-5/16″ (8) on each side for top cover drip edge.
9. See drawing 50TJ500352 for service option details.

DATE 08/26/98
SUPERSEDES -
50TJ016,020 COMBINATION ELECTRIC HEATING/COOLING UNITS
50TJ500624
REV —

CUT ALONG DOTTED LINE CUT ALONG DOTTED LINE

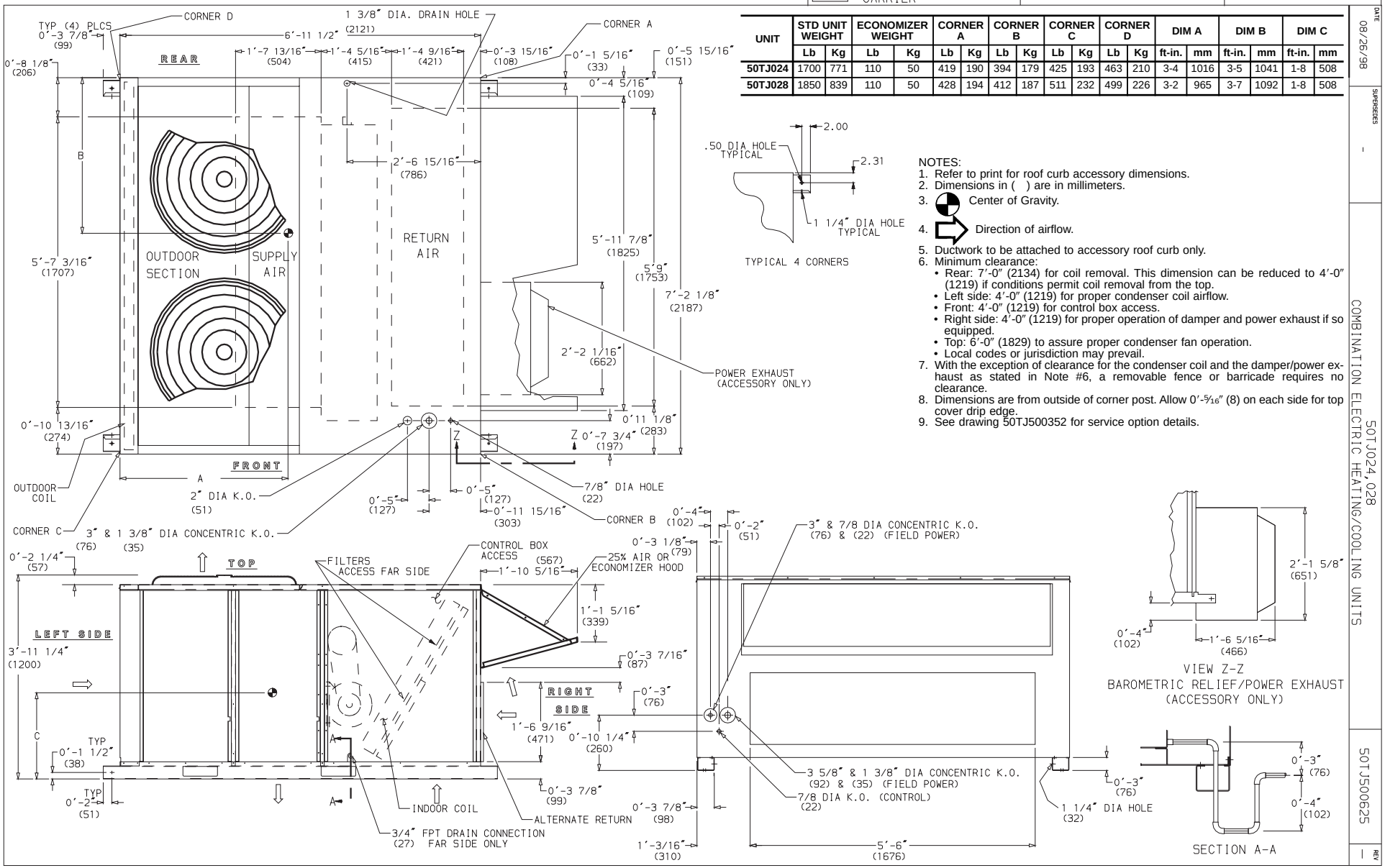
CERTIFIED DIMENSION PRINT

UNITED TECHNOLOGIES CARRIER — P O BOX 4808 SYRACUSE N. Y. 13221

THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER CORPORATION'S WRITTEN CONSENT.

SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT

UNIT	STD UNIT WEIGHT		ECONOMIZER WEIGHT		CORNER A		CORNER B		CORNER C		CORNER D		DIM A		DIM B		DIM C	
	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	ft-in.	mm	ft-in.	mm	ft-in.	mm
50TJ024	1700	771	110	50	419	190	394	179	425	193	463	210	3-4	1016	3-5	1041	1-8	508
50TJ028	1850	839	110	50	428	194	412	187	511	232	499	226	3-2	965	3-7	1092	1-8	508



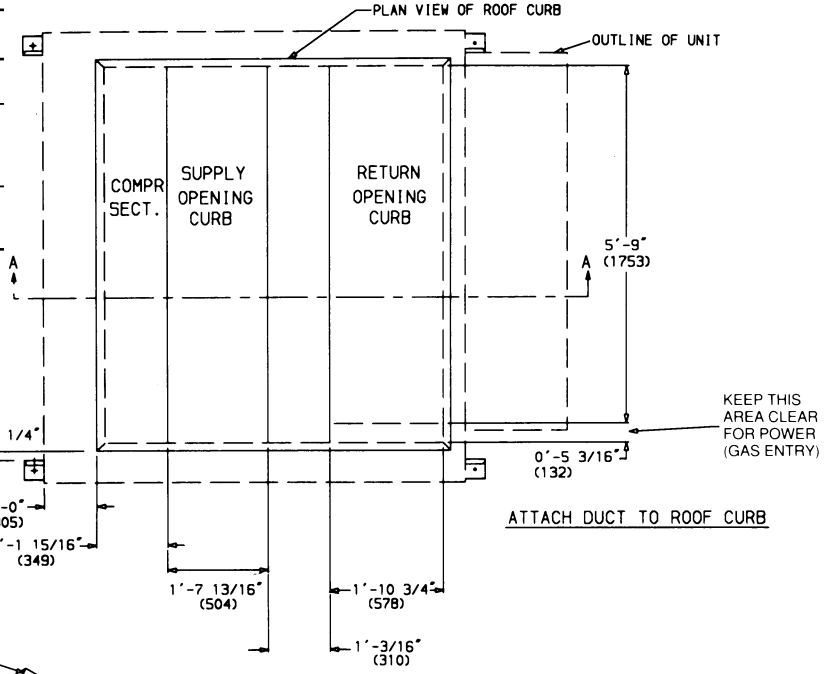
NOTES:
1. Refer to print for roof curb accessory dimensions.
2. Dimensions in ( ) are in millimeters.
3. Center of Gravity.
4. Direction of airflow.
5. Ductwork to be attached to accessory roof curb only.
6. Minimum clearance:
   - Rear: 7'-0" (2134) for coil removal. This dimension can be reduced to 4'-0" (1219) if conditions permit coil removal from the top.
   - Left side: 4'-0" (1219) for proper condenser coil airflow.
   - Front: 4'-0" (1219) for control box access.
   - Right side: 4'-0" (1219) for proper operation of damper and power exhaust if so equipped.
   - Top: 6'-0" (1829) to assure proper condenser fan operation.
   - Local codes or jurisdiction may prevail.
7. With the exception of clearance for the condenser coil and the damper/power exhaust as stated in Note #6, a removable fence or barricade requires no clearance.
8. Dimensions are from outside of corner post. Allow 0'-5/16" (8) on each side for top cover drip edge.
9. See drawing 50TJ500352 for service option details.

DATE 08/26/98 | SUPERSEDES - | 50TJ024,028 COMBINATION ELECTRIC HEATING/COOLING UNITS | 50TJ500625 | REV —

CERTIFIED ROOF CURB DIMENSION PRINT

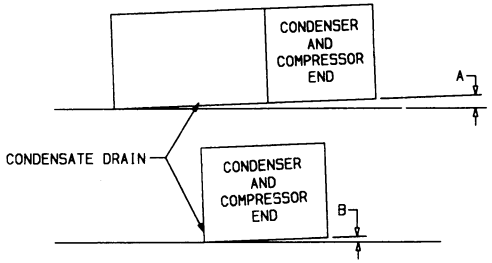
UNITED TECHNOLOGIES CARRIER
P O BOX 4808 SYRACUSE N. Y. 13221
THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER CORPORATION'S WRITTEN CONSENT.
SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT

PKG. NO. REF.	CURB HEIGHT	DESCRIPTION
50PQ900221	1′-2″ (305)	Standard Curb 14″ High
50PQ900141	2′-0″ (610)	Standard Curb for Units Requiring High Installation
50PQ900151	2′-0″ (610)	Side Supply and Return Kit for High Installation



NOTES:
1. Roof curb accessory is shipped disassembled.
2. Insulated panels: ½″ thick neoprene coated 2 lb density.
3. Dimensions in ( ) are in millimeters.
4. Direction of airflow.
5. Roof curb: 16 ga. (VA03-56) stl.

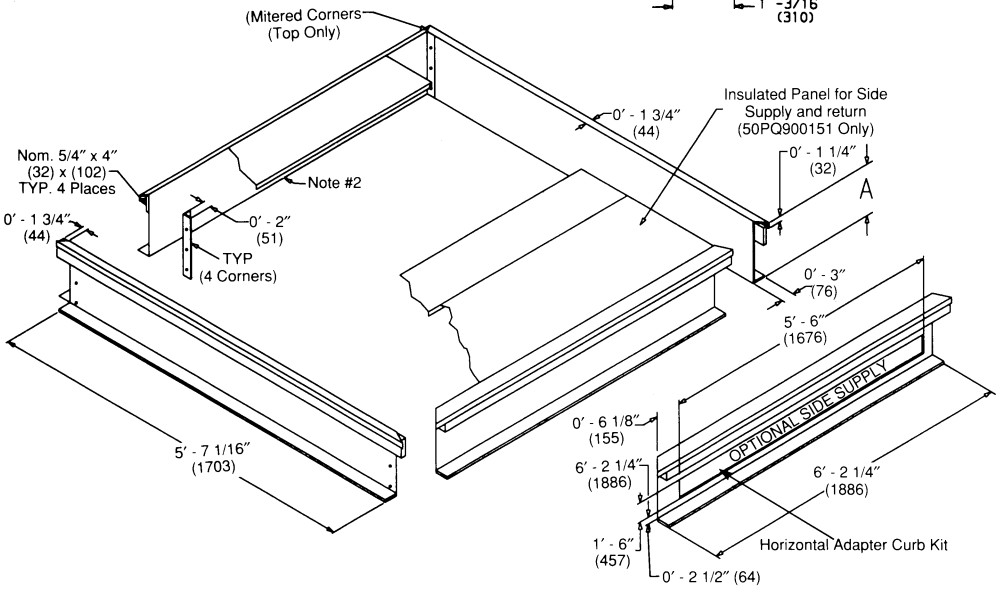
NOTE: To prevent the hazard of stagnant water build-up in the drain pan of the indoor section, unit can only be pitched as shown.

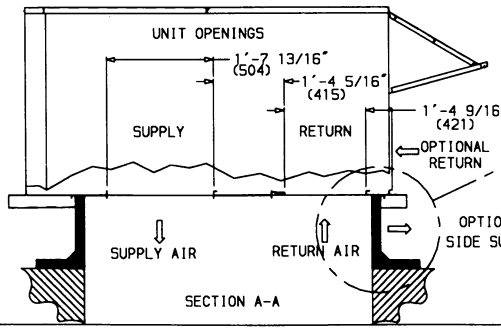


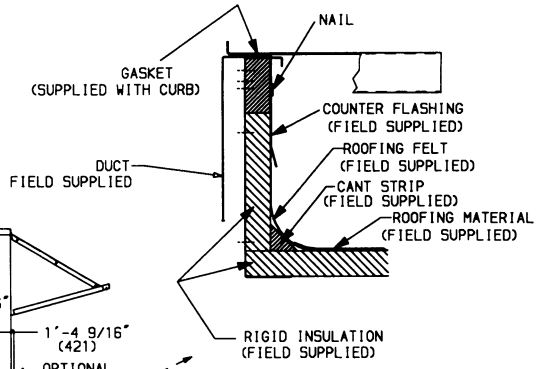
UNIT LEVELING TOLERANCES*
Dimensions (degrees and inches)

UNIT	A		B	
	DEG.	IN.	DEG.	IN.
48/50TJ	.28	.45	.28	.43

*From edge of unit to horizontal.


(Mitered Corners (Top Only)
Nom. 5/4″ x 4″ (32) x (102) TYP. 4 Places
Note #2
0′ - 1 3/4″ (44)
0′ - 2″ (51)
TYP (4 Corners)
5′ - 7 1/16″ (1703)
Insulated Panel for Side Supply and return (50PQ900151 Only)
0′ - 1 3/4″ (44)
0′ - 1 1/4″ (32)
A
0′ - 3″ (76)
5′ - 6″ (1676)
OPTIONAL SIDE SUPPLY
0′ - 6 1/8″ (155)
6′ - 2 1/4″ (1886)
6′ - 2 1/4″ (1886)
1′ - 6″ (457)
0′ - 2 1/2″ (64)
Horizontal Adapter Curb Kit





DATE 06/30/93
SUPERSEDES 06/10/93

48TJD/TJF AND 50TJ016,020,024,028 ROOF CURB (BOTTOM SUPPLY/RETURN UNITS AND OPTIONAL SIDE SUPPLY)

REV 1

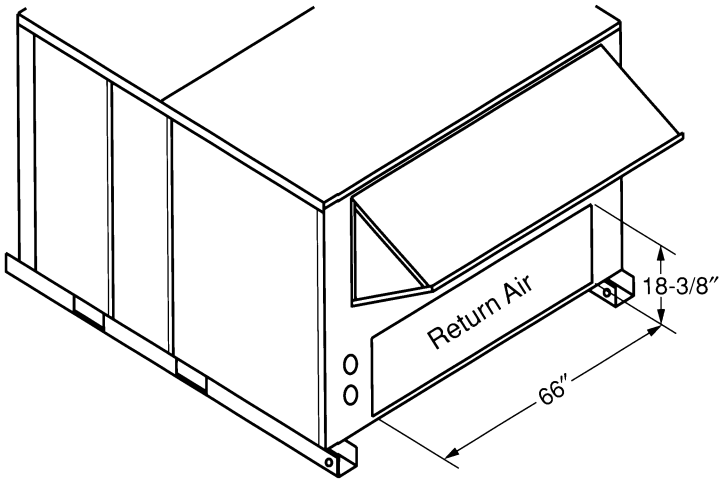
CUT ALONG DOTTED LINE CUT ALONG DOTTED LINE

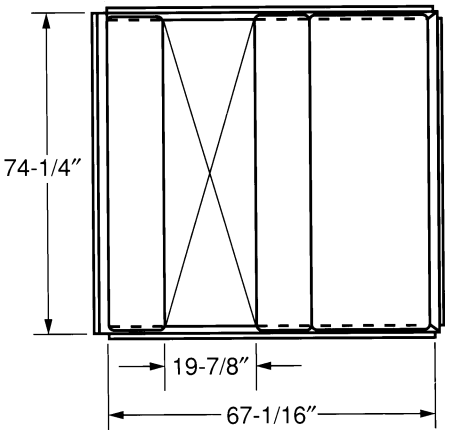
CERTIFIED HORIZONTAL SUPPLY/RETURN ADAPTER DIMENSION PRINT

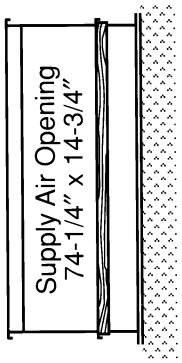
UNITED TECHNOLOGIES CARRIER P.O. BOX 4808 SYRACUSE, N.Y. 13221

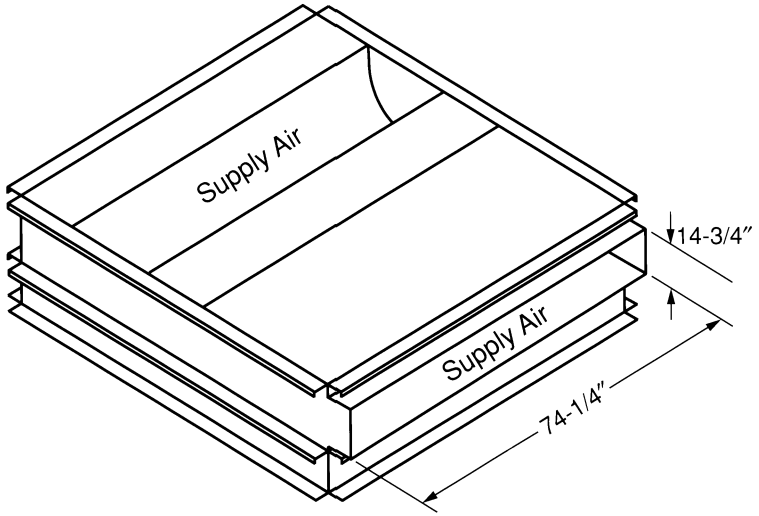
THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER CORPORATION'S WRITTEN CONSENT.

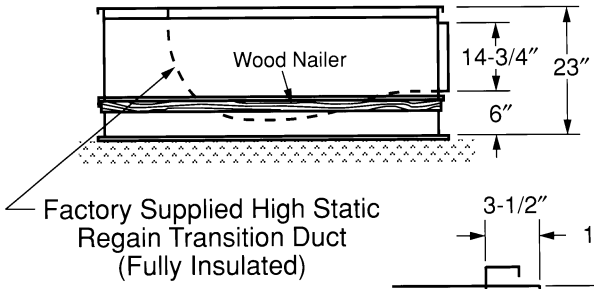
SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT



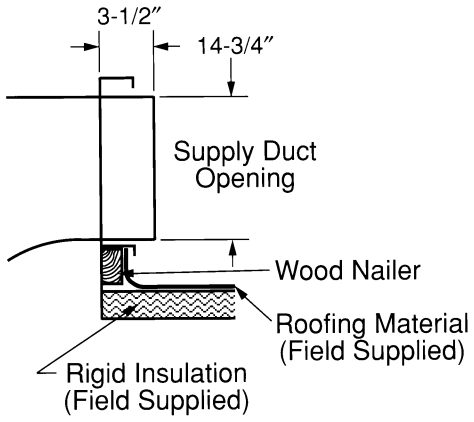








NOTE: The horizontal supply/return adapter roof curb has the same length and width as the standard roof curb.



FACTORY PRE-ASSEMBLED HORIZONTAL SUPPLY/RETURN ADAPTER ACCESSORY 50DP900211

DATE

SUPERSEDES

48TJD/TJF AND 50TJ016,020,024,028
COMBINATION GAS HEATING/ELECTRIC COOLING UNITS

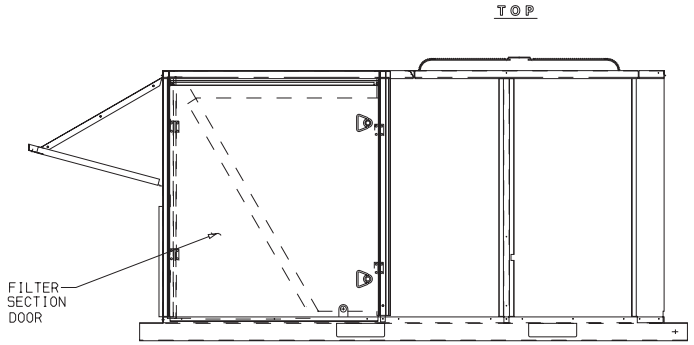
50DP900211

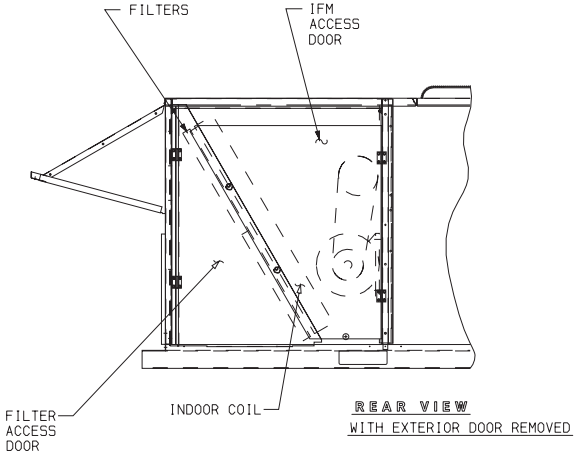
REV

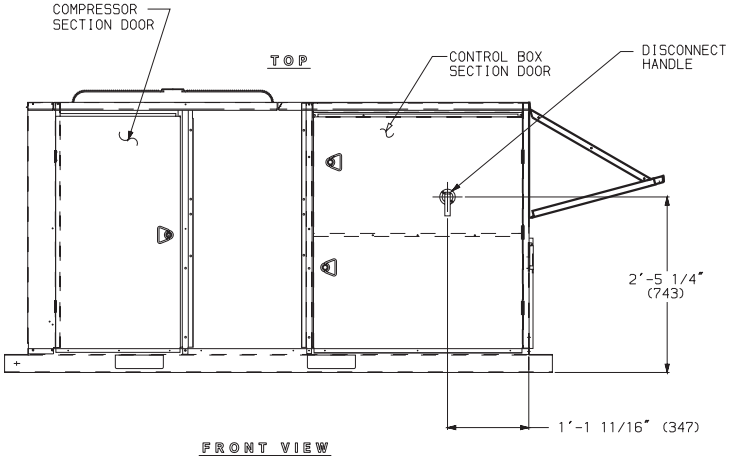
SERVICE OPTION DIMENSION PRINT

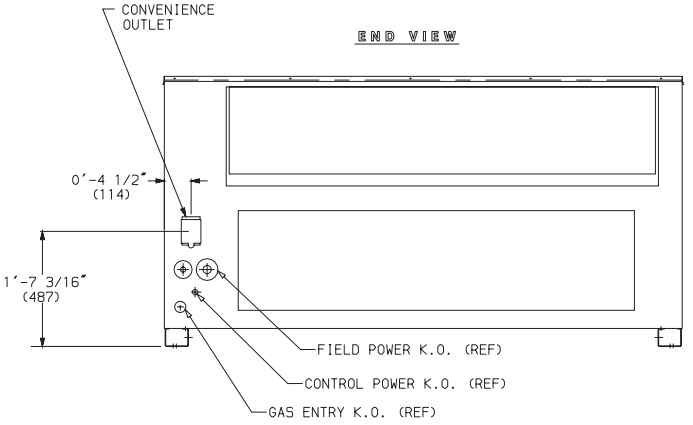
UNITED TECHNOLOGIES CARRIER
P O BOX 4808 SYRACUSE N. Y. 13221
THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER CORPORATION'S WRITTEN CONSENT.
SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT

NOTES:
1. Convenience outlet wiring is field supplied.
2. All access doors are hinged and secured with ¼ turn latches.
3. All filter elements can be removed by grasping filter support tab and sliding outward.









DATE 10/14/97
SUPERSEDES 08/15/97
48 & 50 SERIES TJ 015-028 SERVICE OPTION DETAILS
50TJ500352
REV A